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Hearst District

Fisheries Management Plan

1988-2000



Ministry of
Natural
Resources

Vincent G. Kerrio
Minister

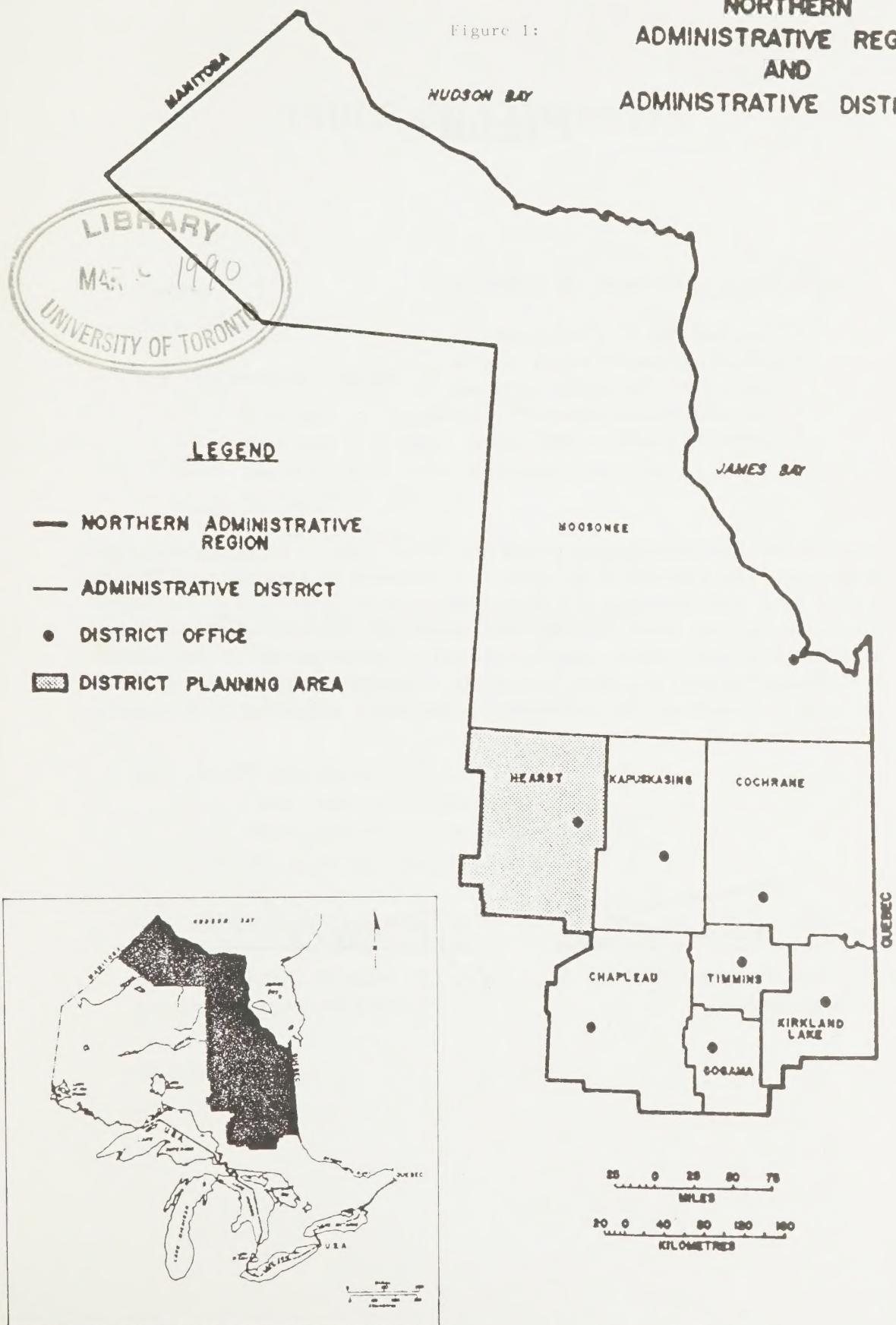


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NORTHERN
ADMINISTRATIVE REGION
AND
ADMINISTRATIVE DISTRICTS

Figure 1:



Preface

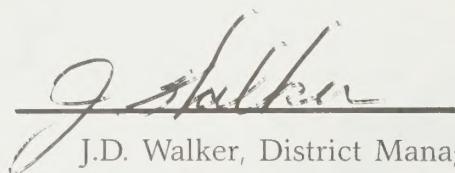
This document consists of the following:

- fisheries resource information
- fisheries objectives and targets
- management strategies and tactics
- five year implementation schedule
- review of public consultation

Collectively, this information forms the Hearst District Fisheries Management Plan. The purpose of this plan is to describe in a formal way the intended long term direction of fisheries management activities in the Hearst District to the year 2000. Management activities indicated within this plan are consistent with targets established in the District Land Use Guidelines. In addition, the plan provides a means by which the fisheries management program in Hearst can be evaluated by the public and fisheries managers.



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TABLE OF CONTENTS

	Page
Preface	ii
Table of Contents	iii
1.0 INTRODUCTION	
1.1 Purpose	1
1.2 Planning Process	1
1.3 Existing Policy and Technical Direction	1
1.4 Background Reports	2
1.5 Public Consultation	2
2.0 DISTRICT FISHERIES PERSPECTIVE	
2.1 Physiography	3
2.2 Fisheries Status	3
2.3 Problems and Issues	4
3.0 MANAGEMENT DIRECTION	
3.1 Objectives and Targets	7
3.2 Management Strategies and Actions	8
3.3 Management Zones	12
4.0 IMPLEMENTATION	14
REFERENCES	20
GLOSSARY	21

	Page
FIGURES	
1. District and Regional Setting	i
2. Background Information (Back Cover Pocket)	
3. Fisheries Management Activities (1988-2000) (Back Cover Pocket)	
TABLES	
1. Sport Fish Production and Harvest	4
2. Fisheries Management Objectives and Targets	7
3. Five Year Implementation Schedule of Fisheries Management Actions	15
APPENDICES	
Appendix I: ANALYSIS OF PUBLIC COMMENTS	24
Appendix II: PROPOSED CHANGES TO HEARST DISTRICT LAND USE GUIDELINES	26
Appendix III: HEARST DISTRICT DESIGNATED TOURISM LAKES	28

1.0 Introduction

1.1 PURPOSE

The purpose of this management plan is to direct M.N.R.'s fisheries management activities in order to create a more efficient and effective fisheries management program within the Hearst District.

The plan will accomplish the following:

- provide opportunities for public involvement
- provide a public statement of our fisheries management intentions
- provide guidance/direction to Ministry of Natural Resources staff
- provide a dynamic / pro-active approach to fisheries management in Hearst District

It is anticipated that the implementation of strategies described in this plan will result in:

- the creation of more angling opportunities
- increased fish production both by natural and artificial propagation
- the development of a higher public satisfaction level with respect to recreational fishing
- increased socio-economic benefits

1.2 PLANNING PROCESS

The planning process followed for the management of Hearst District fisheries resources is consistent with and directed by the Regional Strategic Land Use Plan for Northeastern Ontario (1978-1982) and District land use plans (Hearst District Land Use Guidelines, 1983). The District Land Use Guidelines (DLUG) provide targets and management direction for individual resource management plans, including this fisheries management plan.

Technical direction is provided by the Strategic Plan for Ontario Fisheries (SPOF). All strategies and tactics contained herein are based upon the principles stated in SPOF and are consistent with accepted fisheries management practices and current technology.

This plan considers the intentions of other resource plans (e.g. timber management plans) and provides sufficient flexibility to achieve integrated resources management. The interdisciplinary district planning team provided additional interpretation on policy and management principles and ensured that integration, good science, public interests and legislative considerations were incorporated into the fisheries plan.

Responsibility for the preparation of this document has been assigned to the District Manager, while responsibility for its approval rests with the Regional Director. The plan will be reviewed at five year intervals or whenever major revisions are necessary. Amendments to the plan will follow the "Amendment Procedure for District Fisheries Management Plans in the Northern Region."

1.3 EXISTING POLICY AND TECHNICAL DIRECTION

The fisheries management plan has been prepared within the framework of Ministry of Natural Resources policy and the accepted resource management principles of SPOF and current technology. It is founded on a multiple use philosophy whereby an integrated management process is used to coordinate various programs to ensure that conflicts are minimized and management strategies that benefit several programs are encouraged.

The management plan identifies both long term fisheries management direction (to the year 2000) and specific short term (five year) fisheries management actions to be carried out within the Hearst District. All district fisheries management strategies are intended to contribute toward attaining the objectives and targets identified in the management plan. Annual work plans will reflect the management actions and priorities established in the management plan and the five year implementation schedule.

The plan recognizes commercial tourism as an important use of the fisheries resource in Hearst District. Although no specific allocations of fish are proposed, this plan remains committed to providing a prescribed level of protection to fisheries within those tourism lakes designated in the District Land Use Guidelines. The plan also recognizes that traditional native rights will continue to be respected. However, the nature of existing treaty and aboriginal rights as referenced in the Canadian Constitution continues to require further clarification.

1.4 BACKGROUND REPORTS

A detailed background report which includes analyses of known fisheries information in Hearst District forms the basis for the management direction described in this plan. This document is available for review at Hearst District Office and includes information regarding:

- Terms of Reference
- Resource Inventory and Analysis
- Present Management Practices
- Resource Use and Projections

A condensed version of the background document entitled "Background Information and Optional Management Strategies - A Summary" was published and reviewed by the public in January, 1987.

1.5 PUBLIC CONSULTATION

The Ministry of Natural Resources is and has been committed to involving the public in the development of a comprehensive fisheries management plan for the Hearst District. Public input was solicited initially following release of the background summary and again after release of the draft fisheries plan.

Open houses to discuss the Background Summary were held in Hearst and Hornepayne during January, 1987. Our interpretation of public comment is detailed in Appendix I and summarized as follows:

- overfishing and concerns related to access and habitat degradation are perceived as major problems or issues.
- stocking is also a high priority with particular focus toward improving numbers and diversity of fish species stocked in waters close to Hearst and Hornepayne
- improved public information and education is needed particularly concerning fisheries management issues and fisheries related tourism benefits
- increased enforcement and walleye stocking efforts are perceived as keys to increasing fish populations in the Hearst District.

The second phase of public consultation took place with publication of the "Draft Hearst District Fisheries Management Plan" in tabloid format. The draft tabloid was featured at M.N.R.'s Open House display at Hearst "Springfest" (May, 1988).

The Hearst District Fish and Wildlife Advisory Council reviewed the draft plan and provided suggestions during meetings in December 1987 and May 1988. In addition, public meetings to discuss the draft plan were held in Hearst and Hornepayne in June 1988. Comments received from the public at this time focused on the following perceptions:

- the "directed allocation" system proposed to control fishing pressure on Nagagami Lake is not an acceptable management option at present.
- there is a need to improve fishing opportunities through coordinated input into timber roads planning
- there is a need to increase and improve the efficiency of the District stocking program
- the need for walleye habitat improvement work in locally accessible areas and increased walleye stocking

Strategies to address these concerns are displayed later in this document.

2.0 District Fisheries Perspective

2.1 PHYSIOGRAPHY

This District Fisheries Management Plan covers the waters (approximately 950 sq. km.) contained within the 25,250 sq. km. that make up the Hearst Administrative District (Figure 2).

The height of land dividing the Atlantic and Arctic watersheds bisects the District west to east in the extreme southwest corner of the District. The northern section of Hearst District has several large river systems with relatively steep gradients, progressing downstream to meandering paths and frequent oxbow lakes. The flat, poorly-drained plains of the north and east sections of the District are relatively devoid of lakes. These river systems eventually drain into James Bay via the Kenogami and Missinaibi rivers. The southern section of the District has numerous shallow, irregular shaped lakes which drain into Lake Superior via the Shabotik River. The majority of soils throughout the District contain heavy amounts of clay, resulting in poor drainage. Bedrock within the District is typical of the Precambrian Shield - granitic intrusives with extensive areas of mafic intrusives, sedimentary and volcanic rocks. Lakes are highly alkaline and therefore less susceptible to the effects of acid precipitation.

Warmwater lakes and rivers comprise 94 percent of the District total water area. The majority of these waterbodies contain walleye, northern pike, yellow perch, lake whitefish and suckers. Lake sturgeon occur in some river systems in the northern part of the District.

Coldwater lakes and rivers comprise 6 percent of the District total water area. These systems include waterbodies which are stocked or capable of supporting a coldwater fishery, as well as waterbodies containing naturally reproducing brook trout.

Coldwater lakes occur in the Nagagamisis Uplands (Kame/moraine gravel deposits) and to a lesser extent in the lakes associated with the Rogers Township esker formation. Fish species inhabiting these waterbodies include: lake trout, brook trout, splake, rainbow trout (collectively referred to as salmonids) and lake whitefish.

2.2 FISHERIES STATUS: SUPPLY, HARVEST AND PROJECTED DEMAND

It is estimated that 139,700 kg of sportfish can be produced annually in the Hearst District. The total fishing effort approaches 75,000 angler days annually. Approximately 53 percent of this effort is exerted by resident fishermen and 47 percent by non-residents of Ontario.

The current estimated harvest of sportfish in the District is 68,200 kg per year which translates to about 0.90 kg per angler per day. Based on population projections (assumed 12 percent increase to the year 2000), fishing pressure is expected to increase to 84,000 angler days by the year 2000. At current harvest rates this would result in an annual harvest of about 76,400 kg per year.

The estimated total annual production and current and projected harvest of the major sportfish species are listed in Table 1. Other species include yellow perch, lake whitefish and lake herring.

Table 1. Sport Fish Production and Harvest, Hearst District

Species	Annual Production (kg)	Current Harvest (kg)	Projected Demand (kg)
Walleye	44,100	35,000	39,200
Salmonids (Trout)	11,400	5,900	6,600
Northern Pike	38,500	22,600	25,400
Lake Sturgeon	900	500	600
Other Species	44,800	4,200	4,600

The above figures suggest that the District fish supply should be capable of satisfying angler demand. A number of problems confound this conclusion. Anglers prefer popular sportfish (particularly walleye) whereas species such as whitefish, yellow perch and northern pike are greatly underutilized. Fishing effort within the District is poorly distributed, being concentrated on readily accessible waters. The combination of heavy pressure on easily accessible waterbodies and angler preference for walleye has placed this species in a stressful situation on particular waters. Management strategies have been developed to deal with this and other factors limiting the quality of the District fishery resource.

The only commercial fishing in Hearst District is the baitfish industry, with 59 defined baitfish areas available for licensing. An average of 23 licences are issued annually with a total reported harvest of 14,500 dozen baitfish per year. The baitfish industry is expected to increase in proportion to the increase in sportfish demand.

Indians residing in the Constance Lake Indian Reserve and in Hornepayne currently hold permits to harvest fish for personal use in four District Lakes: Carey, St. Joseph, Pike and Moonlight Lakes. Negotiations to insure conservation of fish are in progress between Treaty Organizations, the Provincial Government and the Federal Government. Amendments to this plan will occur if and when an approved, fishing agreement with the Native People requires such changes.

Currently 21 tourist outfitters operate within the District. Outfitters offer a variety of unique services to anglers such as air service to remote lodges and outpost camps. All District outfitters depend heavily on a sustained, quality walleye fishery.

2.3 PROBLEMS AND ISSUES

A number of problems and issues affect the attainment of the fisheries targets in the Hearst District. Identified direct and indirect problems and issues are:

i) Overexploitation

There are 15 walleye lakes in the District which are being stressed by intense sport fishing.

These are:

Hanlan	Shannon	Linbarr
Pivabiska	Lac Ste. Therese	Buffalo Island
Fushimi	Obakamiga	Government
Wolverine	Granitehill	East Government
Stoddart	Lessard	Nagagamisis

These lakes represent 39 percent of known walleye waters in the District and 34 percent of the total allowable yield.

Walleye overharvest in these waters is primarily attributed to high angler preference for this species. High angler concentrations, ease of access and inherently low productivity within most of these waterbodies contribute to the difficulty in maintaining quality walleye angling opportunities. The challenge is to maintain the number of angling opportunities while decreasing walleye harvest to a level capable of sustaining a quality fishery. Strategies considered in this plan to deal with this issue include: harvest controls, creation of alternate fishing opportunities and, in certain cases, remedial habitat work to increase production.

ii) Tourism Industry's Need For Remote, High Quality Fishery

There are 27 lakes designated for tourism in Hearst District (Appendix 3).

The tourism industry depends on high quality angling experience in a remote setting. Some members of the public disagree with the priority given to tourism on designated lakes as they believe it limits their use of these lakes. New access developments in proximity to these designated lakes must be managed in a manner which ensures maintenance of high quality angling opportunities both to tourism clients and non-tourism anglers. Strategies are presented later in this plan which emphasize maintenance of traditional access means and provision of new fishing opportunities for non-tourism anglers.

iii) Access

District fishing pressure for walleye and northern pike is concentrated on readily accessible waters. A total of 20,400 ha of water with an estimated annual production of 39,100 kg of walleye and northern pike is contained within privately owned townships and is therefore not available to the angling public. In addition, a number of lakes and rivers within Crown townships are presently inaccessible. There is a need to provide new road accessible fishing opportunities to redistribute angling pressure from currently overharvested waters.

iv) Habitat Degradation

Environmental quality can be reduced by a number of different activities. Removal of shoreline and streamside vegetation through forest management activities, erosion and obstruction of waterways via natural means (e.g. beaver dams) have, in the past, all contributed to reduced fish production through water quality impairment and spawning habitat disturbance. In Hearst District, critical fisheries habitat has been protected through coordinated review of proposed resource development activities by M.N.R. and other agencies. The environmental quality of fisheries habitat must be protected by ensuring adequate identification of critical sites, appropriate application of habitat guidelines, judicious enforcement of habitat legislation and rehabilitation of damaged habitat.

v) Unwanted Species Introductions

The introduction of yellow perch into stocked brook trout lakes has resulted in predation upon and competition with brook trout. This results in reduced survival of preferred fish and reduced returns to the angler. Increased communications and enforcement efforts are required to reduce the introduction of unwanted species in District lakes.

vi) User Perceptions

Anglers in the District have a definite preference for walleye, brook trout and lake trout. Species such as yellow perch, northern pike and lake whitefish are not being utilized to any significant degree. Users must be informed that production capabilities of District waters are also limited and that stocking is not a comprehensive solution to production limitations or overharvesting (particularly with respect to District walleye populations). The intent of the District stocking program is to provide a diversity of alternate fishing opportunities and assist in directing angling pressure away from overharvested native species (walleye).

3.0 Management Direction

3.1 OBJECTIVES AND TARGETS

A number of objectives and targets were developed for the Hearst District Land Use Guidelines (DLUG) to direct management effort to enable the Ministry of Natural Resources to meet the demands placed upon the fishery. The objectives and targets reflect provincial concerns but have been refined to accommodate the capability of local resources and known demands of the user groups (Table 2). Management strategies have been developed for each objective and target, identifying specific actions necessary for target achievement.

The management objective in DLUG is divided into sportfish, commercial fish and lake trout objectives. Subsequent analyses of fisheries resource data indicated that the DLUG targets could be refined to more appropriately represent the District fisheries resource. As a result, the sportfish target was divided into four sub-targets (walleye, northern pike, salmonids and other species), the lake trout objective and target were incorporated into the sportfish objective and target and the DLUG objective for the commercial fishery was modified by deleting the food fishery component but retaining bait-fish (Table 2, Appendix II).

Table 2: Fisheries Management Objectives and Targets

BROAD FISHERIES MANAGEMENT OBJECTIVE

To protect, enhance, maintain and rehabilitate fish communities and their environment in order to provide an optimum contribution of fish, fishing opportunities and their associated benefits to society.

SPORTFISH OBJECTIVE	COMMERCIAL FISH OBJECTIVE
To maintain opportunities for a diversified angling experience and meet the future angling demand for all species within the limits of sustained yield management.	To manage baitfish to ensure socioeconomic benefits and the maintenance of stable fish communities within the limits of sustained yield management.
SPORTFISH TARGET	COMMERCIAL FISH TARGET
To satisfy the angling demand through the provision of 76,400 kg of sportfish per year by the year 2,000. This target is broken down into the following species sub-targets:	To administer baitfish to meet the demand of the sport fish industry.
Walleye -	to provide for a harvest of 39,200 kg by the year 2000.
Northern Pike -	to provide for a harvest of 25,400 kg by the year 2000.
Salmonid -	to provide for a harvest of 6,600 kg by the year 2000.
Other Species -	to provide for a harvest of 5,200 kg by the year 2000.

3.2 MANAGEMENT STRATEGIES AND ACTIONS

3.2.1 INTRODUCTION

A variety of strategies and actions exist to address the major problems and issues. The ones selected and described on the following pages reflect an appropriate mix of good science, dollar cost, public input and practicality.

The strategies identified will be implemented through:

- the preparation, maintenance and annual updating of a five year implementation schedule identifying specific actions necessary to meet the targets and strategies set out in the management plan;
- annual work plans consisting of specific projects and programs funded and approved through the Ministry's budgeting process;
- Community Fisheries Involvement Programs (C.F.I.P.) (The future role of C.F.I.P. in fisheries management is currently under review. Changes may occur which will affect future management action.)
- projects funded under various special fisheries programs;
- participation in the planning and undertaking of other programs within the Ministry;
- involvement in the review of project or development proposals of other government agencies and the private sector;
- co-operative management efforts with clubs, organizations, municipalities and individuals.

3.2.2 ISSUE: OVEREXPLOITATION

Strategy • align harvest of walleye with allowable yield by reducing or controlling harvest.

Actions - implement new regulations such as season manipulation, size limits and creel limits to control harvest.
- create new sanctuaries to protect breeding populations.
- direct access to underutilized waters to reduce pressure on overharvested lakes, where feasible.
- promote live release of walleye at local fish derbies.

Strategy • reduce pressure on walleye by creating alternate fishing opportunities.

Actions - introduce smallmouth bass or salmonid species into suitable recipient lakes.
- promote use of underutilized fish species such as yellow perch and lake whitefish.

Strategy • increase enforcement effort and effectiveness in areas where overexploitation is a problem.

Actions - direct existing enforcement efforts to problem areas through analysis of reported or detected fisheries violations.

Strategy • undertake periodic creel surveys and assessment studies on designated waterbodies.

Actions - assess the success of new introductions of walleye, smallmouth bass and salmonids.
- conduct creel surveys and assessment studies on waterbodies suspected of being overharvested.
- assess lakes with potential for new introductions of hatchery or wild fish.
- increase the District data base by conducting inventories on selected watercourses.

Strategy • increase the return of hatchery fish to the angler through innovative management techniques.

Actions - evaluate performance of stocked fish survival to improve efficiency of stocking program.
- expand stocking of brook, lake, rainbow trout and spalake commensurate with fishing pressure and relative benefits realized.
- establish spalake fisheries in selected trout lakes which are currently not producing at optimum levels.

3.2.3 ISSUE: TOURISM'S NEED FOR REMOTE HIGH QUALITY FISHERY

Strategy • develop cooperative management initiatives with the tourism industry to ensure sustained high quality angling opportunities.

Action - identify and implement (where necessary) additional potential sanctuaries.
- implement slot or maximum size limits for walleye on selected tourism lakes.
- conduct periodic creel surveys and assessment studies. (e.g. fecundity studies)

Strategy • maintain traditional means of access to tourism lakes.

Action

- provide input into Timber Management Plans with particular attention to road plans.
- improve integrated resource management efforts toward protection of remote tourism values and provision of new fishing opportunities for non-tourism clients.
- employ appropriate signage to protect the fisheries resources on designated tourism lakes.

3.2.4 ISSUE: ACCESS

Strategy • negotiate access to lakes within privately owned townships and to lakes within Crown townships.

Actions

- enter into co-operative agreements with landowners and members of the public to allow use of existing private roads to access specific lakes.
- promote access to appropriate waterbodies on Crown land through input into Timber Management Plans.

3.2.5 ISSUE: HABITAT DEGRADATION

Strategy • control resource development activities to ensure that habitat is not adversely affected.

Actions

- ensure implementation of districts and provincial habitat management guidelines.
- provide additional training to conservation officers and other staff to enable them to better identify sites where habitat degradation is occurring.
- provide input into resource development plans by identifying "areas of concern".
- enforce various acts and legislation to protect fish habitat.

Strategy • rehabilitate degraded critical habitat on selected waterbodies.

Actions

- identify sites where habitat degradation has occurred.
- remove debris, old beaver dams and log jams from selected watercourses to allow access to spawning sites.
- promote CFIP habitat improvement proposals.

3.2.6 ISSUE: SPECIES INTRODUCTIONS

Strategy • reduce the presence of unwanted species in District lakes.

Actions

- introduce regulations prohibiting use of live bait in selected salmonid lakes.
- communicate to the public the effect of unwanted species introductions.
- erect signs at selected lakes warning anglers not to dump live bait at the conclusion of fishing.

3.2.7 ISSUE: USER PERCEPTIONS

Strategy • develop and maintain an active District Fisheries and Wildlife Advisory Council to reduce conflicts among users of the environment and the fisheries resource.

Strategy • increase public awareness

Actions

- conduct fisheries seminars concentrating on walleye production limitations and use of alternate (underutilized) fish species.
- participate in school programs and lecture to groups or associations.
- promote the Community Fisheries Involvement Program (CFIP).

3.3 MANAGEMENT ZONES

A system of Quality Fishing Zones (QFZ) has been developed to assist in the administration of District fisheries management projects. The zones are intended for planning purposes only.

Three types of Quality Fishing Zones have been initiated. Each zone has a specific management intent which serves as a focus for intensive application of selected management actions. The remaining District fisheries, not presently included within zones, will receive more extensive application of management actions. Existing zone boundaries may change and new zones may be created as additional management data is collected. Management actions prescribed for zones are consistent with accepted area activities in DLUG.

The management intents for each zone recognize existing use patterns, common sets of problems and issues and the resource potential for each area. Cooperative management ventures between M.N.R. and local client groups (e.g. Fish and Game Clubs, Cottage Associations, Tourist Operators) will be encouraged within each QFZ. Zones are, therefore, an attempt to make the best use of each area type in a cost - and labour - efficient manner. They will provide an effective way to meet future angling demand, develop diversified angling experiences and optimize social and economic benefits. They will also assist fisheries managers in determining where specific strategies should be implemented and in measuring effectiveness of management actions taken.

Quality Fishing Zone locations are indicated in Figure 3. The following text describes the purpose and strategies for each zone type. Management actions for zones are presented in the implementation schedule (Table 3).

Quality Fishing Zone 1 - Enhanced Sportfish Zone

The Enhanced Sportfish Zone includes selected lakes within the Nagagamisis Uplands, Forde Lakes Area and along the Rogers Road (Rogers TWP. TWP#238). This zone is managed to provide numerous and diversified angling opportunities to local residents of Hearst, Constance Lake and Hornepayne. Cooperative management (M.N.R./local Fish and Game Clubs) will be employed within this zone.

Selected Strategies:

- intensive stocking (frequent and diverse) of trout species and smallmouth bass.
- intensive stocking assessment to increase stocking program efficiency and improve return of hatchery fish to anglers.
- selective baitfish restrictions.
- access provision/improvement to newly stocked lakes.
- habitat assessment and improvement.

Quality Fishing Zone 2 - District Tourism (remote) and Outpost Lakes

This remote tourism zone includes the 27 tourism lakes designated in Hearst DLUG. The zone is managed to recognize and protect remote tourism values. Cooperative management between M.N.R. and the tourism industry will be employed to ensure sustained, high quality angling opportunities.

Selected Strategies:

- slot or maximum size limits for walleye on selected waterbodies.
- input into Timber Management Plans with particular attention to road plans.
- create additional sanctuaries, where necessary, to protect breeding stocks of walleye.
- promote use of imported fish and underutilized fish species (e.g. yellow perch, whitefish) for shore lunches.

Quality Fishing Zone 3 - Provincial Park and Cottage Lakes

Zone 3 includes Fushimi and Nagagamisis Lake Provincial Parks, Hearst Chain of Lakes, Shannon, Banks and Stoddart Lakes and Government Lake. The management intent is to maintain or improve existing angling quality in these lakes and apply the selected management strategies to newly proposed cottage lakes to ensure a sustained quality fishery. Management actions will be primarily employed by M.N.R. However, involvement of cottagers, cottage associations or parks volunteers will be encouraged.

Selected Strategies:

- conduct spawning habitat assessments and improvements.
- implement size and/or creel limits and sanctuaries where appropriate.
- conduct periodic harvest assessments (creel surveys).
- ensure adequate input (particularly regarding harvest and habitat impacts) into cottage development plans.

4.0 Implementation

The previous section outlined preferred management strategies and specific actions developed through public input. The actual waterbodies where these activities will be carried out are indicated in the first 5-year (1988-1992) implementation schedule (Table 3). The number of projects completed will be dependent upon funding levels.

Fisheries management projects to be undertaken in accordance with this plan are subject to requirements of the Environmental Assessment Act. As a result of complying with appropriate Class Environmental Assessment requirements, there may be changes to specific actions identified in the plan.

Routine planning, administrative, public relations and normal enforcement functions have been excluded from the following schedule. Also excluded are specific CFIP projects. Selected projects indicated in the schedule may, however, become eligible for CFIP application.

Annual fisheries work program plans will be developed based on scheduling and priorities indicated in the implementation schedule. Please note that waterbodies will be added or deleted from the following list as new information becomes available.

Table 3: Five Year Implementation Schedule of Fisheries Management Actions

Action	Location	Quality Fishing Zone ²	Issue(s) Addressed/ Rationale
Waterbody	Township	Zone ²	
OVEREXPLOITATION			
<ul style="list-style-type: none"> Additional stockings and introductions of trout species 			
Brook Trout (6 lakes)	Lake #8 Little Hart* Gagnon* Shapeless! Murphy Anita ¹	Larkin Gill Arnott Arnott Arnott Arnott	<ul style="list-style-type: none"> Increase number of fish, lakes and diversity of species stocked Provide alternate angling opportunities Relieve pressure on overexploited walleye lakes
Splake (4 lakes)	Rabbit* Slim Bluebelle* Rice ¹	Gill McEwing Studholme Gill	
Lake Trout Rainbow Trout (2 lakes)	Lake #65* Hart* Rice ¹	Beaton Gill Gill	
OVEREXPLOITATION/TOURISM			
<ul style="list-style-type: none"> Index-netting and walleye production (fecundity) studies 			
Chain of Lakes	Stoddart/Hanlan	3	
Nagagami Nagagamisis	Nagagami McEwing	2 3	<ul style="list-style-type: none"> Walleye production and population status assessment Determine appropriate regulation options (size limits, sanctuaries, etc.)

Table 3 (continued): Five Year Implementation Schedule of Fisheries Management Actions

Action	Waterbody	Location	Township	Quality Fishing Zone	Issue(s) Addressed/ Rationale
• Habitat assessment and improvement- removal of natural (e.g. beaver dams) and man-made instream obstructions	Chain of Lakes Ritchie Lake Ritchie Creek Shannon Creek Stoddart Creek Cree Creek Nagagamisis Lake	Stoddart/ Hanlan Ritchie Ritchie Shannon Stoddart Haig McEwing		3	HABITAT <ul style="list-style-type: none">• Improve degraded habitat• Increase walleye production
• Inventory selected rivers/streams with priority to reaches with proposed, near-future (5-year plan) development plans	Streams along TMP planned roads Shekak River Goat River Fire River		District		HABITAT/ACCESS <ul style="list-style-type: none">• Improve data base for fisheries management and habitat protection
• Provide access to appropriate waterbodies through input into Timber Management Plans	Selected waters		District		ACCESS/ OVEREXPLOITATION <ul style="list-style-type: none">• Increase fishing opportunities• Improve access; redistribute angling pressure
• Implement sanctuaries ¹	Holland Creek Obakamiga River (Nagagami Lake) Duck Bay (Nagagamisis Lake)		Stoddart Nagagami McEwing	3 2 3	OVEREXPLOITATION/ TOURISM <ul style="list-style-type: none">• Limit walleye overexploitation• Increase walleye production
• Implement size limits ¹ (e.g. slot or maximum size)	Chain of Lakes Nagagami Lake		Stoddart/ Hanlan Nagagami	3 2	OVEREXPLOITATION/ TOURISM <ul style="list-style-type: none">• Limit walleye overexploitation• Increase walleye production

Table 3 (Continued): Five Year Implementation Schedule of Fisheries Management Actions

Action	Waterbody	Location	Township	Quality Fishing Zone	Issue(s) Addressed
• Manage access to designated tourism lakes	As per DLUG	District			TOURISM/ACCESS <ul style="list-style-type: none">• Provide protection of remote tourism values
• Implement and strictly enforce District and Provincial Habitat Management Guidelines	Selected waterbodies	District			HABITAT <ul style="list-style-type: none">• Prevent habitat degradation.• Maintain current level of sportfish production
• Instruct construction contractors regarding habitat protection measures through field inspection and workshops		District			USER PERCEPTIONS/HABITAT <ul style="list-style-type: none">• Increase public awareness
• Assess success of recent introductions	Selected walleye lakes Selected trout lakes Selected bass lakes	District			OVEREXPLOITATION <ul style="list-style-type: none">• Improve stocking program
• Assess waterbodies for new introductions	Lake #127 Abram Lake Ritchie Lakes Area	Foch Studholme Ritchie			OVEREXPLOITATION <ul style="list-style-type: none">• Improve data base for future fisheries management
• Continued stocking of existing trout lakes	Selected trout lakes	Selected townships			OVEREXPLOITATION <ul style="list-style-type: none">• Maintain/improve stocking program

Table 3 (Continued): Five Year Implementation Schedule of Fisheries Management Actions

Action	Waterbody	Location	Township	Quality Fishing Zone	Issues(s) Addressed
OVEREXPLOITATION/ TOURISM					
• Creel surveys	Chain of Lakes	*Stoddart/ Hanlan		3	• Assess fishing pressure • Improve data base for future management prescriptions
	Shannon Lake	Shannon		3	
	Obakamiga L.	Cholette		2	
	Granitehill L.	Drew		2	
	Goat L.	Minnipuka		2	
	Nagamensis L.	McEwing		3	
OVEREXPLOITATION					
• Inventory 3 coldwater lakes	Selected lakes	District			• Improve data base for candidate stocking lakes
	Angelina Lake #107	Studholme Foch		1	
	Lapworth [*] Lake #63*	McEwing Beaton Ritchie		1	
	Little Jaydee			1	
OVEREXPLOITATION					
• Introduce walleye into* 2 lakes					• Increase walleye production
OVEREXPLOITATION					
• Introduce smallmouth bass into 3 lakes					• Improve stocking program (diversity)
					• Provide alternate angling opportunities
					• Relieve pressure on over-exploited walleye lakes
OVEREXPLOITATION/ TOURISM					
• Index - netting only	Kabinakagami L.	Lizar/Ermine		2	• Assess walleye production status
	Obakamiga L.	Cholette		2	
	Granitehill L.	Drew		2	

Table 3 (Continued): Five Year Implementation Schedule of Fisheries Management Actions

Action	Waterbody	Location	Township	Quality Fishing Zone	Issue(s) Addressed
• Direct enforcement to problem areas		District			USER PERCEPTIONS <ul style="list-style-type: none">• Increase public awareness of management programs
• Provide technical assistance for CFIP projects		District			OVEREXPLOITATION <ul style="list-style-type: none">• Protect breeding stock• Direct pressure away from walleye
• Implement trophy fishery for Northern Pike ¹	Fushimi L.	Fushimi/ Stoddart		3	OVEREXPLOITATION/ ACCESS <ul style="list-style-type: none">• Redistribute existing angling pressure
• Conduct access negotiations with private landowners		Waterbodies within free-hold townships			OVEREXPLOITATION <ul style="list-style-type: none">• Provide alternate angling opportunities
• Develop Sturgeon Management Plan for Kenogami River/Mammamattawa area	Kenogami R.	Mammamattawa Area			USER PERCEPTIONS/ SPECIES INTRODUCTIONS <ul style="list-style-type: none">• Increase public awareness of fisheries management programs and foster realistic expectations from the resource.
• Public Education: <ul style="list-style-type: none">- conduct fisheries seminars/workshops- promote live release at fish derbies- maintain Fish and Wildlife Advisory Council		Hearst/ Hornepayne District			USER PERCEPTIONS <ul style="list-style-type: none">• Completed projects

* Completed projects

¹ Pending Class E.A. or assessment study recommendations (e.g. for Rice Lake, studies will determine most appropriate species to stock in that particular lake)

² See Figure 3 (Back Cover Pocket) for location.

Generally, fisheries management programs over the next 5-year period will focus on:

- i) increasing and diversifying angling opportunities near the communities of Hearst and Hornepayne,
- ii) rehabilitation, and
- iii) assessment.

Angling opportunities will be expanded and diversified by additional and introduced stockings of smallmouth bass, walleye and salmonids. Waterbodies located near the communities of Hearst and Hornepayne will receive stocking priority. The majority of stocking effort will occur in the Enhanced Sportfish Zone (QFZ-1). This zone will be expanded as new candidate lakes are identified.

Rehabilitation of critical fisheries habitats will be carried out on a prioritized basis, with initial concentration applied to watercourses close to Hearst and Hornepayne. Habitat assessment/improvement and enforcement of appropriate regulations will be the primary management techniques used to maintain or improve fisheries habitat and populations.

Assessment will involve a number of operational programs, including creel survey projects, index netting, walleye fecundity/maturity and spawning habitat studies. Aquatic habitat and population assessment are necessary prerequisites to rehabilitation work. They are also necessary to determine the effectiveness of specific management techniques in addressing problems or issues. Stream habitat assessment efforts will also be increased in terms of identifying new coldwater fisheries and providing satisfactory input into Timber Management Plan site prescriptions.

This plan will be reviewed every 5 years, or whenever major amendments are required. Any revision will be subject to public notice and review, following the Amendment Procedure for District Fisheries Management Plans in the Northern Region, and must be approved by the District Manager and Regional Director. Approved changes will be reflected in the District Land Use Guidelines (DLUG). Similarly, any subsequent changes in DLUG direction will require revision of this plan.

References

- Ontario Ministry of Natural Resources. 1980. Strategic Plan for Ontario Fisheries.
- Ontario Ministry of Natural Resources. 1982. Northeastern Ontario Strategic Land Use Plan.
- Ontario Ministry of Natural Resources. 1983. Hearst District Land Use Guidelines. Hearst, Ontario.
- Ontario Ministry of Natural Resources. 1986. Background Information and Optional Management Strategies and Actions: Hearst District Fisheries Management Plan. 1986-2000. A Summary. Hearst, Ontario.
- Ontario Ministry of Natural Resources. 1988. Hearst District Fisheries Management Plan - Draft Tabloid. Hearst, Ontario.

Glossary

Allowable Yield (Sustainable Yield)

The weight of fish, by species, that can be harvested annually from a lake, on a sustained basis, while maintaining angling quality.

Angler Day

A measure of fishing effort by anglers. While it is usually accepted that any amount of effort in a day constitutes one angler day, for the purposes of converting angler hours to angler days, one angler day will be the equivalent of four (4) hours of angling effort.

Aquatic Habitat Inventory

A basic study of a lake or river to determine species present, water chemistry, depth, water volume and other characteristics. The information obtained can be used to determine the potential and allowable yield of a lake.

Areas of Concern

Areas requiring particular management prescription in order to maintain or improve resource values such as fish and wildlife habitat, forest genetic resources, scenic areas and other recreational and tourism values.

Baitfish

Any fish species that can legally be harvested by the commercial bait fish industry.

Coldwater Lakes

Those lakes having characteristics which would support salmonids such as lake trout or brook trout. Usually are relatively deep, clearwater lakes.

Commercial Fish

Any fish that are harvested by the commercial fishing industry under the authority of a licence.

Creel Survey (Census)

A survey of anglers to determine angler origin, number of fish caught, species of fish caught, weights of fish and number of hours fished. Other information such as age of fish and gear used may also be collected.

Critical Fish Habitat

Any fish habitat required for the maintenance of a healthy fish population or otherwise identified as essential to the achievement of the Ministry's fishery program objectives.

Designated Tourism Lakes

Lakes identified in the Hearst District Land Use Guidelines as areas where the Ministry wishes to primarily promote a tourism objective. The purpose of this identification is generally to provide the required resource base (usually fishing) in support of a commercial tourist operation. The lake must not have current road access and the fisheries potential must be able to support the commercial operation on a sustained yield basis. There are 27 so designated lakes in the District (Appendix III).

Directed Allocation

A system proposed to control fishing pressure on Nagagami Lake through controlled distribution of angler "day-use" tags to tourism clients and the general public.

Fecundity Studies

Studies undertaken to determine the spawning potential, age at maturity and relative contributions of age classes to spawning of a fish stock. These studies are usually conducted prior to implementing size-limit (e.g. slot-size, or maximum size) management decisions.

Goal

A general purpose to which the Ministry aspires.

Integrated Resource Management

The co-ordination of resource management programs to ensure that conflicts are minimized and that management which would benefit several programs is encouraged. Integrated management encourages multiple use, but recognizes that in some circumstances management of certain areas for a single purpose may be necessary.

Maximum Size Limits

A management technique that protects fish above a specified length, i.e. fish caught that are larger than the maximum length must be released.

Non-Resident

Any angler whose principle residence is not in Ontario.

Objective

A quantifiable and attainable end which the Ministry's efforts intend to accomplish.

Overexploitation (Overharvest)

Harvest of fish by users which exceeds the annual allowable yield.

Policy

A government decision concerning the objectives to be achieved and the means of achieving them.

Potential Yield

The amount of fish flesh (weight) that can be removed from the water on a sustained basis without detrimentally impacting the fish community.

Rehabilitation

This term may be applied both to fish populations and fisheries habitat. In both instances, rehabilitation denotes efforts to enhance or restore a degraded or stressed situation to its original condition.

Resident

Any angler whose principle residence is in Ontario.

Slot-Size

A management technique that protects fish within a specified length range, i.e. fish caught that fall within the length range must be released. The slot protects breeding individuals.

Sport Fish

Any fish that are legally caught by angling; usually include such species as: walleye, northern pike, perch, lake trout, smallmouth bass, brook trout, rainbow trout, and lake sturgeon.

Strategy

Broadly planned actions or measures to achieve a desired end.

Tactic (Management Action)

A specific method designed to achieve one or more strategies.

Target

A quantified end to be achieved or completed by a specific date.

Trophy Fishery

A fishery managed for trophy opportunities. It provides the opportunity to catch a large fish.

Warmwater Lakes

Those lakes other than coldwater lakes.

Work Plan

A plan prepared annually which defines what management activities are to be undertaken for that year. Direction is taken from the implementation schedule.

Appendix 1: Analysis of Public Comments

Public Consultation

The Ministry of Natural Resources has been committed to involving the public in the preparation of the Fisheries Management Plan for Hearst District. The initial phase of public consultation occurred following publication of "The Background Information and Optional Management Strategies Summary". Public response to this document was analyzed, an internal report prepared and used to accommodate public input into the Draft Plan. Subsequent public review of the Draft Fisheries Plan was used to prepare this final fisheries plan. A summary analysis of input received from this process is provided.

Public Response to Draft Tabloid

a) Tabloid Distribution (bilingual)

Hearst Springfest	400
DFMP Mailing List	225
Public Meetings:	
Hearst	200
Hornepayne	50
Hearst Club Chasse et Peche	<u>100</u>
	975
Number of Comment Sheets Returned	70
Response Rate:	7.2%

b) Respondents Affiliation

Angler 83%	Angling Association 6%	Tourist Outfitter 5%	Other 6%
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Other Affiliations:

- Ministry of Northern Development and Mines
- Ministry of Natural Resources, Terrace Bay
- Hearst Town Council
- Ontario Hydro

Comments Received (Summary Analysis)

A total of 70 sheets containing comments to the draft tabloid were returned by the public. However, 94 individual comments were noted on the 70 sheets. The following summary indicates the percentage of comments received per individual issue based on a sample size of 94 comments.

Strategy/Issue	Percent Response	Comments
• Directed Allocation - Nagagami Lake/Access restriction to tourism lakes	42.5	<ul style="list-style-type: none"> • all responding strongly opposed • 58% of all comment sheets indicated opposition to any form of real or perceived access limitation • also received 600 name petition, opposing this strategy by Hearst Town Council
• Increase stocking	19.1	<ul style="list-style-type: none"> • 13% requested additional walleye stocking. Walleye hatcheries and increased bass stocking also requested. • following lakes suggested for walleye stocking: Strait, Ritchie, Stoddart, Dosley, Blue Pike, Stray, Bell, Casgrain
• Improve access to new fisheries; upgrade existing access	9.6	<ul style="list-style-type: none"> • generally in favor of TMP road planning to access new fisheries • suggestion for upgrading roads to Red Pine and Ritchie Lakes
• MNR favouring tourist operators over local anglers	9.6	
• Increase habitat improvement work for walleye	5.3	<ul style="list-style-type: none"> • Ritchie Lakes area • French Creek (Chain of Lakes)
• Additional sanctuaries	3.2	<ul style="list-style-type: none"> • suggested areas: Nagagamisis Provincial Park (Duck Bay, Park Lake), Nagagami Lake (Obakamiga River)
• Increase enforcement	2.1	
• Slot limits - Chain of Lakes	2.1	<ul style="list-style-type: none"> • opposed
• Quality Fishing Zones	1.1	<ul style="list-style-type: none"> • in favour of system
• Need for more fisheries management information	1.1	
• Increase public education	1.1	
• Decrease walleye limit from 6 to 3	1.1	
• Protect tourism lakes	1.1	
• Totally disagree with entire plan	1.1	

APPENDIX II
PROPOSED CHANGES TO HEARST DISTRICT LAND USE GUIDELINES

ITEM	HEARST DISTRICT LAND USE GUIDELINES	CHANGES PROPOSED AS A RESULT OF FISHERIES MANAGEMENT PLANNING
Sport Fish Target	To satisfy angling demand through the provision of up to 261,300 kilograms of sportfish per year.	<p>To satisfy the angling demand through the provision of 76,400 kilograms of sportfish per year by the year 2000.</p> <p>Walleye - to provide for a harvest of 39,200 kg by the year 2000.</p> <p>Northern Pike - to provide for a harvest of 25,400 kg by the year 2000.</p> <p>Salmonid - to provide for a harvest of 6,600 kg by the year 2000</p> <p>Other Species - to provide for a harvest of 5,200 kg by the year 2000.</p>
Commercial Fishing Objective		<p>To encourage the harvest of commercial fish populations when it is biologically and economically feasible.</p> <p>Commercial fishing will be considered on the larger lakes in the District i.e. over 280 ha on a lake-by-lake basis.</p> <p>The present level of baitfish harvesting will be encouraged to continue with new areas being examined on a case-by-case basis.</p>
Commercial Fishing Target		<p>To manage for the survival and maintenance of significant lake trout populations as well as the provision of angling opportunities.</p>
Lake Trout Objectives		<p>Lake trout objective deleted; Incorporated into Sport Fish objective</p>

ITEM	HEARST DISTRICT LAND USE GUIDELINES	CHANGES PROPOSED AS A RESULT OF FISHERIES MANAGEMENT PLANNING
Lake Trout Target and Strategy	<p>Type A lakes contain excellent populations of naturally reproducing lake trout. Hearst does not have any type A lakes.</p> <p>Type B lakes contain either fair populations of naturally reproducing lake trout or excellent populations which are dependent upon stocking. On type B1 lakes, the Crown has retained ownership and therefore control of the shoreline. These lakes will be managed exclusively for lake trout. No additional access or development will be permitted. Corine, Redpine and Big Skunk are type B1 lakes in the Hearst District. Type B2 lakes have some private shoreline development and will be managed for lake trout but consideration will be given to other objectives on a case-by-case basis. Arnott Lake is the only type B2 lake in the District. Type C lakes contain poor lake trout populations. This is usually due to restrictive habitat conditions, e.g. summer oxygen depletion, etc. Hearst has no type C lakes (see appendix B).</p>	<p>Lake trout target and strategy deleted. Replaced with Sport Fish Target (Salmonids).</p>

Appendix III: Hearst District
DESIGNATED TOURISM LAKES

Lake Name	Township
Ahmabel	Mercer, Hiawatha
Bayfield	Bayfield
Breckenridge	Breckenridge
Buffalo Island	Chelsea, Cholette
Cameron	Derry
Crescent	Ermine
Ermine	Ermine
Fraser	Hiawatha
Goat	Minnipuka
Gourlay	Gourlay
Granitehill	Drew
Kabinakagami	Derry, Lipton
Kabinakagamisis	Lizar, Ermine
Larkin	Lipton
Lascelles	Larkin, Lascelles
Lessard	Lascelles
Linbarr	Lessard
Little Goat	Foch
McCoy	Minnipuka
Nagagami	Cholette, Chelsea
Obakamiga	Nagagami, Hiawatha
Pichogen	Cholette
Puskuta	Marjorie
Shekak	Puskuta
Tony	Cholette
Upper Pichogen	Ermine
White Owl	Irving
	Matthews

DISTRICT DE HEARST DISTRICT

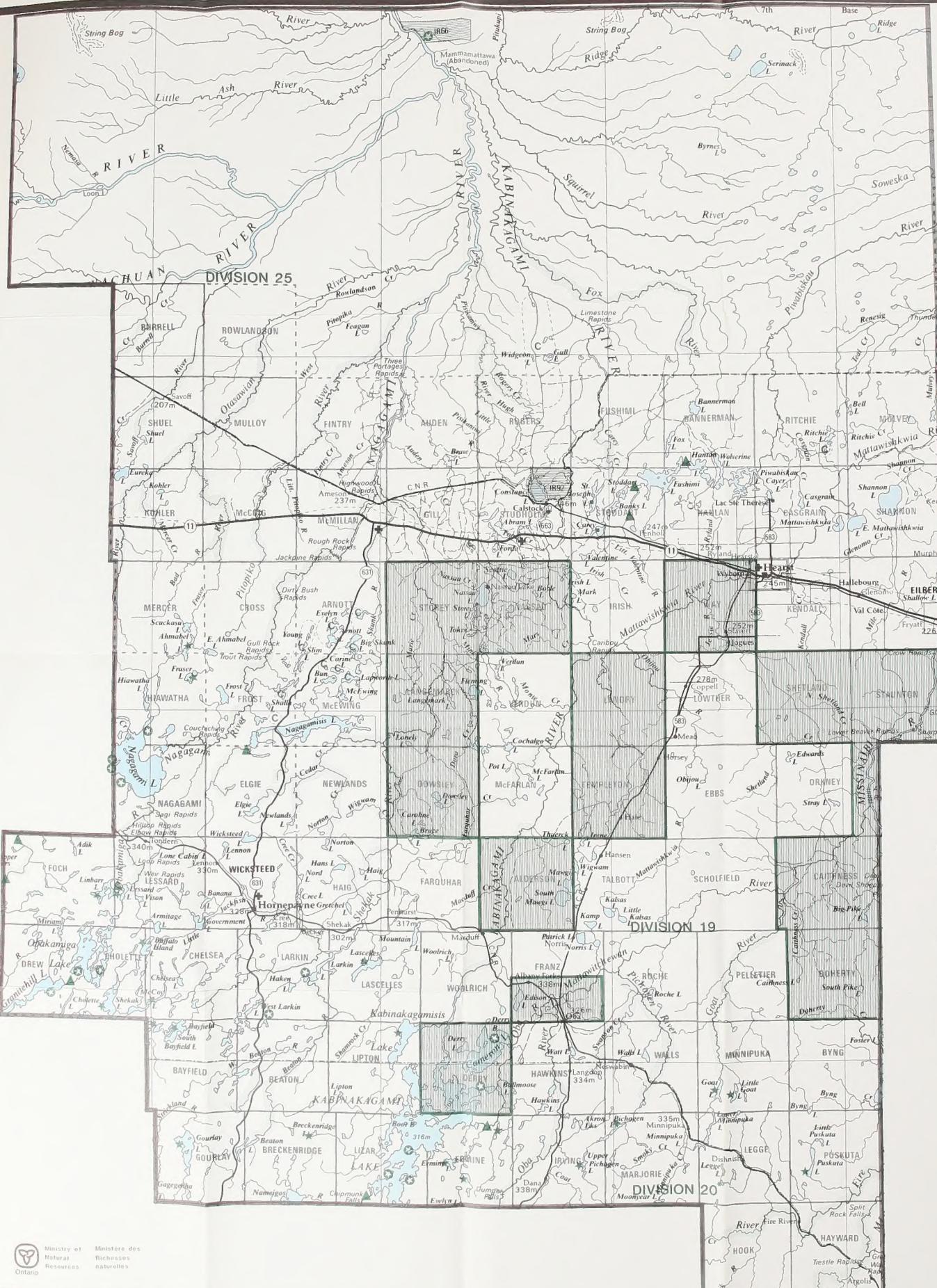


FIGURE: 2

FISHERIES BACKGROUND INFORMATION

RENSEIGNEMENTS GÉNÉRAUX SUR LES PÊCHES

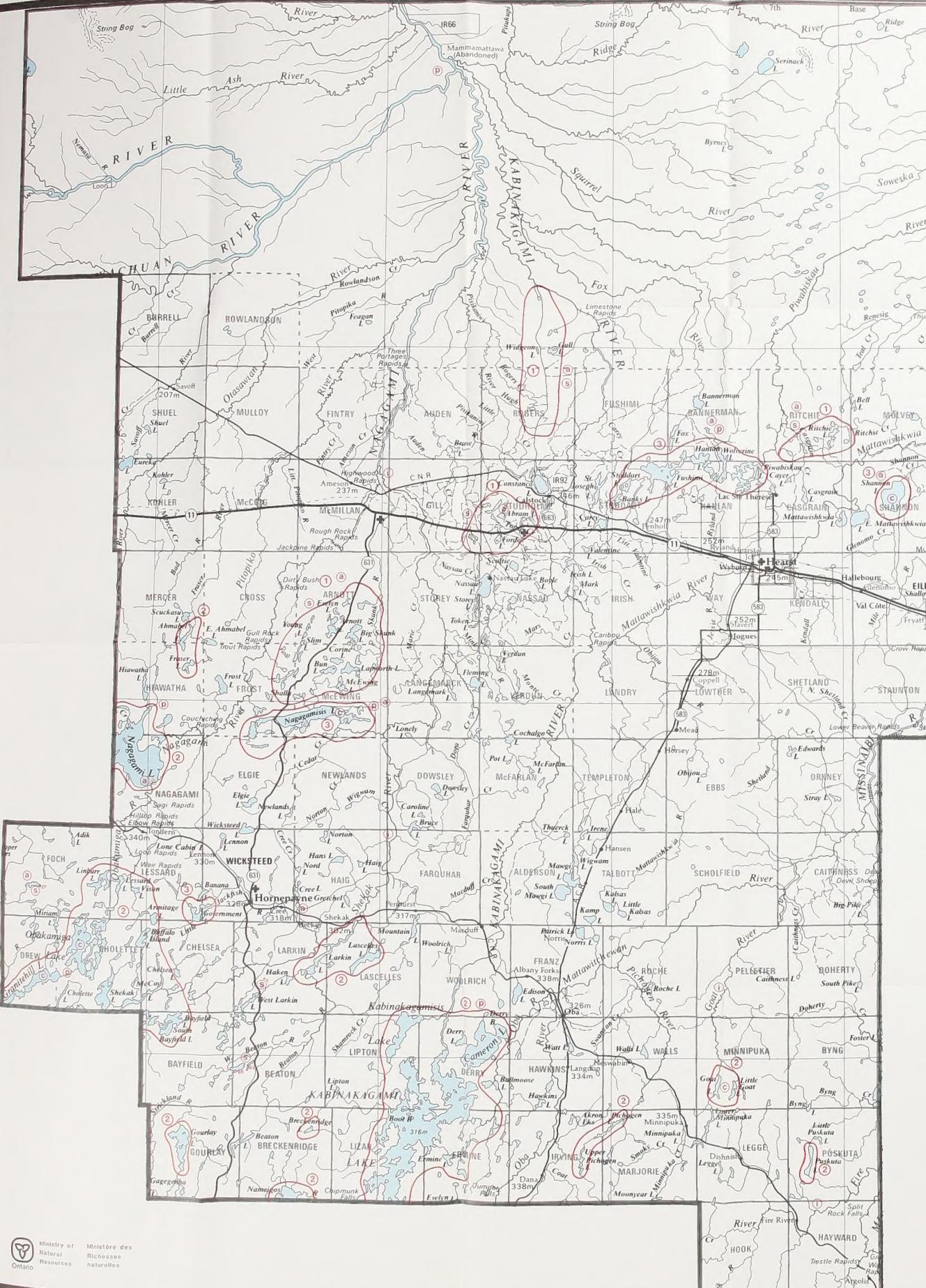
LEGEND / LÉGENDE

- Tourism Lodges
Pavillons touristiques
- ★ Tourism Outpost Camp Lakes
Lacs avec camps touristiques éloignés
- Coldwater Lakes (natural and stocked) and Streams
Lacs et rivières d'eau froide (naturels et empoisonnés)
- ▲ Fish Sanctuaries
Réserves de pêche
- Indian Reserves
Réserves indiennes
- Privately Owned Townships
Cantons privés
- Fishing Division Boundary
Limite de division pour la pêche
- Native Subsistence Fishing Lake
Lac où les autochtones pratiquent la pêche subsistance

DIVISION 20*

Division 20 to be incorporated into Div. 19 pending 1990 Fisheries Regulation change.

La division no. 20 sera incorporée à la division no. 19 à la parution des changements des règlements de la pêche de 1990.



DISTRICT DE HEARST DISTRICT

FIGURE 3:
FISHERIES MANAGEMENT
ACTIVITIES
ACTIVITÉS DE GESTION
DES PÊCHES
1988-2000

LEGEND/LÉGENDE

Quality Fishing Zones (boundaries approximate)
Zones de pêche de qualité (limites approximatives)

- ① Enhanced Sportfish Zone
Zone de pêche améliorée
- ② Remote Tourism Zone
Zone de tourisme en région éloignée
- ③ Provincial Parks/Cottage Lakes
Parcs provinciaux/lieux avec aménagement de chalets

Management Activities
Activités de Gestion

- ④ Stocking/Introductions
Empoissonnement/introductions
- ⑤ Creel Surveys/
Décompte des prises

Production Studies (index netting, fecundity studies)
Etudes de production (échantillonnage de prises au filet, études de fécondité)

- ⑥ Habitat Assessments (for new introductions, rehabilitation work, potential sanctuary implementation)
Evaluation de l'habitat (nouvelles introductions, réhabilitation, établissement de réserves de pêche)
- ⑦ Aquatic Habitat Inventory (Large River Surveys)
Inventaire de l'habitat aquatique (études de grandes rivières)
- ⑧ Proposed Sanctuaries
Réserves de pêche proposées

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